Alexa Sbordone

CBSE 7201T

# (2015, May 10). Does Technology Belong in Classroom Instruction? *The Wall Street Journal.* Retrieved from [http://www.wsj.com/articles/does-technology-belong-in-classroom-](http://www.wsj.com/articles/does-technology-belong-in-classroom-i) instruction-1431100454

There is the on going discussion of whether or not technology should be in the classroom and how it either helps or does not help students. Some think it is an excellent resource and can expand their students’ horizons, while others think there is a danger and it diminishes the teacher’s role. Two educators, Lisa Nielsen, who thinks technology will benefit students José Antonio Bowen, who argues that technology in the classroom often is a negative are discussed in this article.

(2016, July 20) Multiple Intelligences: What Does the Research Say? Retrieved from [http://www.edutopia.org/multiple-intelligences-research](%09http://www.edutopia.org/multiple-intelligences-research)

# This article discusses the theory of multiple intelligences that was proposed by Howard Gardner in 1983. The eight intelligences that he proposed each represent a different way of how humans process information. The eight intelligences are verbal-linguistic, logical-mathematical, visual-spatial, musical, naturalistic, bodily-kinesthetic, interpersonal and intrapersonal. A common fallacy about this theory is that it means the same thing as learning styles.  Multiple intelligences represents different intellectual abilities where as a learning styles, according to Howard Gardner, are the ways in which an individual approaches a range of tasks. When students are provided with multiple ways to access information, it improves learning.

# (2007, November 5). What Is Successful Technology Integration? [Web log]. Retrieved from https://www.edutopia.org/technology-integration-guide-description

Technology integration is when students using technology daily. Students have access to a variety of tools that match the task at hand and this provides them with the opportunity to create a deeper understanding of content. There are many varied tools and practices, and many ways technology can become a fundamental part of the classroom. Online learning, project based learning, game based learning, using devices, research and social media are just some ways that we can integrate technology in to the curriculum. There are four levels of how technology is integrated, sparse, basic, comfortable and seamless.

Blau, I. (2011). Teachers for "Smart Classrooms": The Extent of Implementation of an Interactive Whiteboard-based Professional Development Program on Elementary Teachers' Instructional Practices. *Interdisciplinary Journal of E-Learning & Learning Objects, 7 (7275-289,* 1-16*.*

This text discusses a study that analyzed the implementation of an interactive whiteboard professional development program on instructional practices of elementary teachers in Israel. After the teachers completed the 30 hour professional development program the question, “to what extent are elementary teachers observed to implement IWB-related strategies in their instructional practices?” was asked.  This study investigated whether teachers use interactive whiteboard functions that promote student-centered learning process, scaffolding, and moderating student thinking and knowledge construction.

Bricker, V. (2015). iPads for Access, Independence, and Achievement. *Odyssey: New Directions In Deaf Education*, 1610-13.

This article shows how technology can open up possibilities that never before dreamed these deaf students might have. It also discusses how expensive technology can be and how it could be turned down by the administration because of the money, most schools do not buy computer devices for individual students. It shows students what they can do independently when given the technology that provides them with access to learning. Technology has opened a whole new light to these deaf and hard of hearing students.

Caranikas-Walker, F., Huntsberger, B., Maloney, C., Shapley, K., Sheehan. D., Sturges, K.   (2006) Effects of Technology Immersion on Teaching and Learning: Evidence from Observations of Sixth-Grade Classrooms. *Texas Center for Educational Research*.

The Technology Immersion Pilot (TIP) sets forth a vision for technology immersion in Texas public schools that links access to technology with student achievement. This study focuses on the effects of technology immersion on teachers’ classroom practices and students’ learning opportunities. Conducted in sixth grade classes at immersed and control schools during fall 2004 and spring 2005, where laptops were fully engrossed in the classrooms. In conclusion, this technology enriched “traditional” practices, their greatest value lies in the provision of new student opportunities for more authentic and intellectually challenging school work. It was also observed that many classrooms have a teacher-centered environment, as opposed to a learner-centered environment.

Carver, L. B. (2016). Teacher Perception of Barriers and Benefits in K-12 Technology Usage. *Turkish Online Journal Of Educational Technology - TOJET, 15(1),* 110-116.

This article explains studies that were done about K-12 teachers’ perceptions of the benefits and barriers to technology integration by either teachers or students in K-12 instruction. During this study completed in 2006, there were major concerns that impact both student and teacher use, equipment availability, more than any other factor, seemed to have the greatest impact on whether technology was incorporated into classroom instruction. Teacher knowledge and skill, although a concern, was not the teachers’ first consideration. The major reason teachers chose to use technology was because they felt it resulted in increased student engagement. Some of the same factors that impacted whether students used the computer were evident in the decision about whether teachers used technology. Equipment availability, instructional time schedules, and curricular concerns were all concerns that impacted both teacher and student technology usage.

Cradler, J., McNabb, M., Freeman, M., & Burchett, R. (2002). How Does Technology Influence Student Learning?. *Learning & Leading With Technology*, 29(8), 46-49,56.

This article outlines how technology influences student achievement and academic performance in relation to achievement in content area learning, higher-order thinking and problem-solving skill development and workforce preparation. Technology can improve student achievement in content area learning if used appropriately and integrated into the curriculum and standards of the grade level. Technology can be used to build higher order thinking skills, as technology can aid in finding solutions. The use of technology can also prepare students for the work force, by linking these skills with academic disciplines. This research shows how technology can be incorporated in classrooms to play a supplemental role to positively influence students' academic performance.

Giles, R. M., & Shaw, E. L. (2011). SMART Boards Rock. *Science And Children*, 49(4), 36-37.

Technology has flooded our world with both good and bad, so it is only appropriate that we are using it in schools. SMART Boards are an effective method of integrating technology with typical teaching strategies to make science learning more motivational and meaningful for our technologically advanced students. Once a knowledge base has been established in the classroom then teachers can continue instructional activities, and using a SMART board is a great extension. It provides students with an on screen interactive experience that delivers a valuable way of delivering information.

Grant, M. M., Ross, S. M., & Wang, W. (2005). Computers on wheels: an alternative to ‘each one has one’. *British Journal Of Educational Technology*, *36*(6), 1017-1034.

An elementary school launched a pilot laptop program designed to determine the impact of changing the ways students learn and teachers instruct in a technology-enhanced learning environment. The teachers were enthusiastic and through professional development, were fully prepared to be able to integrate technology in the classroom, with confidence.  The school brought in two 15-computer wireless laptop carts that were to be shared among four classrooms in an effort to integrate technology across the curriculum and affect change in student learning.  There were positive results, whereas next time they would use different strategies and focus on student centered learning.

Guru, C. (n.d.) The Disadvantages of Technology in Classroom. [Web log]. Retrieved from <http://www.eslteachersboard.com/cgi-bin/tech/index.pl?read=136>

While we read about the many advantages of integrating technology into the classroom, we should be educated on the disadvantages and challenges that may arise. Some disadvantages are the lack of support, inadequate teaching methodology, time lost, upkeep and maintenance expenses and incompatibility issues. If the teacher is not properly trained in using the technology, it will be of no use to both the student and the teacher. It may take a lot of time for students to learn how to use new programs offered to them. We often hear the term “technical difficulties,” using technology is any way, there could always be a connection issue that can take away from learning time. Money is an issue in many aspects, but a large issue when it comes to purchasing technology for large groups of people. We need to find a way to connect using technology with the old school way of paper and pencil.

Jackson, A., Gaudet, L., McDaniel, L., & Brammer, D. (2009). Curriculum Integration: The Use of Technology to Support Learning. *Journal Of College Teaching & Learning*, *6(7*), 71- 78.

This article discusses Howard Gardner’s Theory of Multiple Intelligences, one that was created in 1983 to account for all potential in children and adults. This theory shows us that there is more than one way to facilitate learner for different groups of children in our classrooms. Since 1983, this theory has expanded as new intelligences have been added. As things are rapidly changing in the field of education, educators need to keep up with that. This article discusses how we can use technology to support Gardner’s theory. An observation was conducted with a select group of learners where 60% of the class showed engagement. It is important that educators should focus on how to meet the needs of their students since they have grown up with technology and not concentrate on what we can achieve from it.

Kalota, F., & Hung, W. (2013). Instructional Effects of a Performance Support System Designed to Guide Preservice Teachers in Developing Technology Integration Strategies. *British Journal Of Educational Technology*, *44(3),* 442-452

This article discusses the experiences of preservice teachers utilizing performance support system (PSS) technology to develop knowledge related to classroom technology integration.

The research question that this investigation studies is; does MAPS, which is based on the concept of advance organizers, improve preservice teachers’ knowledge of technology integration? A pre- and post- test was given to the teachers for this study. Results showed that, although their learning improvement was not significant, the teachers responded to PSS use positively. Based on the results, it is recommended that the PSS environment should be updated based on the feedback from the participants, and additional long-term studies should be conducted to validate the current findings.

Keengwe, J., & Hussein, F. (2014). Using Computer-Assisted Instruction to Enhance Achievement of English Language Learners. *Education And Information Technologies, 19(2*), 295-306.

This article studies English-language learners (ELL) and their achievement by using computer-assisted instruction (CAI). ELL’s are the fastest growing percentage of the overall student body in the United States. This article is very relevant to my situation as my school has a population of over 26% ELL students and the class that my observations will take place in has a 50% rate. Educators should put computer technology in an ELL environment because it motivates students, enhances student learning and encourages team work. In conclusion of this study, the students that used computer assist classroom instruction showed improvement of their scores in reading and math. This study shows that there is a connection between students’ achievements and using computer-assisted instruction, but the technology must be used selectively and appropriately to complement teaching.

Kulik, James A. (2003). “Effects of Using Instructional Technology in Elementary and Secondary Schools: What Controlled Evaluation Studies Say” *SRI Project Number P10446.001*: SRI International. Web. 8 Sept. 2016.

This article explains at report that reviews findings from controlled evaluations of technology applications in elementary and secondary schools. Studies were done in various academic disciplines; reading, writing, math and science.  This article discusses integrated learning systems, word processing, computer enrichment and microcomputer-based laboratories.  Overall, evaluation studies suggest that schools have been more successful in using instructional technology during the past decade than they were in earlier years.

Lewis, D. H. (2012, January 1). Enhanced One-to-One Technology Integration through Elementary Teachers' Technological, Pedagogical, and Content Knowledge. *ProQuest LLC*.

This study focused on technology integration and teachers in elementary classrooms. Data was collected through interviews and observations from nine elementary classroom teachers. As in the title, it focuses on three knowledge domains; technology, pedagogy, and content. The connections of these three domains include the technological, pedagogical, and content knowledge framework. It thus represents the knowledge that teachers need to integrate technology successfully in the classroom.

Li, J., Snow, C., & White, C. (2015). Teen Culture, Technology and Literacy Instruction: Urban Adolescent Students' Perspectives. *Canadian Journal Of Learning And Technology, 41(3*).

Emerging technologies have become increasingly embedded in urban adolescents' lives, as shown by the time teenagers spend in virtual space, it has become a part of their culture and upbringing. This study was conducted with a small sample of students, interviewed, at one school. In conclusion of this study urban teens primarily use social media and technology devices for peer socializing and they were interested in using technology to improve their literacy skills, but did not appear to independently integrate technology into learning. Students should be explicitly taught how to efficiently use technology for academic purposes. These findings lead to suggestions for developing effective literacy instruction using new technologies.

Loertscher, David V. "Unleash the power of technology in education." *Teacher Librarian* 39.1(2011): 46+. *Academic OneFile*. Web. 8 Sept. 2016.

This text describes how the technology of today and tomorrow can serve as a motivation for change in primary and secondary education. It discusses how teachers, leaders and policymakers can harness the benefits of new technology to dramatically improve academic achievement and outcomes.  It discusses different systems in place and available to those in education.  Closed-loop instructional systems take a holistic approach and incorporate technology to its fullest potential.

Means, B. (2010). Technology and Education Change: Focus on Student Learning. *Journal Of Research On Technology In Education, 42(3),* 285-307.

A study was done with two sub-sample schools, this article then discusses the follow-up data collection of 14 schools. The sample consisted of schools where teachers use software with their students that have attained above-average achievement gains and at schools where there was below-average gains. The issues of instructional coherence and competition for instructional time are highlighted as challenges to software implementation. Some issues discussed in the results of this study were the level of software use, classroom management, facilitation during software use and articulation and integration of instruction with and without software.

Mechling, L. C., Gast, D. L., & Krupa, K. (2007). Impact of Smart Board Technology: An Investigation of Sight Word Reading and Observational Learning. *Journal Of Autism And Developmental Disorders*, *37(10),* 1869-1882.

Most technology used in classrooms are tools for individual student use. This article shows a study of SMART Board Technology with small groups on sight word reading. Research supports learning by students with moderate intellectual disabilities in a small group arrangement and that sight word reading has been among the skills taught within a small group.

Northrop, L., & Killeen, E. (2013). A Framework for Using iPads to Build Early Literacy Skills. *Reading Teacher, 66(7*), 531-537.

This article discusses using iPads in early childhood classrooms to build literacy skills. Tools, like iPads, should be used to connect school and home learning activities. This technology needs to be used in a careful and deliberate way to ensure learning and development of early literacy skills. The use of technology is not going to automatically increased achievement, it is to be used in an appropriate and grade level manner. There are steps to take when using iPads to ensure successful results. Teachers can give explicit instruction on the skill, explain and model how to use the iPad, work together with the iPad and the students and last the students will have enough understanding to work independently. Technology is an aid in the classroom, it is not to take the teachers place.

Signal, M. (2015). Bloom's Taxonomy and Technology Integration. [Web log] Retrieved from [http://www.brighthubeducation.com/teaching-methods-tips/111749-integrating-blooms-](http://www.brighthubeducation.com/teaching-methods-tips/111749-integrating-blooms-t) taxonomy-and-technology-into-curriculum/

Bloom’s Taxonomy places thinking skills in a six-tiered hierarchy that can help teachers to design objective-based lessons by helping them understand what thinking skills students need to complete different tasks. Technology is one method to help students meet standards.

Students succeed when they are able to demonstrate what they can do. Allowing students to use technological tools can accommodate for different learning styles in the classroom. This also allows students to have the opportunity to work with the kinds of tools they probably use at home and that they will eventually be using in the workplace. Teachers should slowly begin to incorporate technology in the classroom and should not be afraid of it.

# Starr, L. (2011). Technology Integration Ideas That Work. [Web log] Retrieved from http://www.educationworld.com/a\_tech/tech/tech176.shtml

In the past, technology has been its own class in school, separate from the disciplines. In the 21st century, it is not time to be assimilated. We can incorporate technology in the classroom across all disciplines, not how to use it, but using it efficiently to bring learning to a new level. Web sites, Microsoft office tools, word processing and other tools are few of the resources that teachers have available to use daily. Both teachers and administration have to come together in order to make this work in schools, everyone needs to be on the same page, equally knowledgeable for this integration to work.

Wang, C., Ke, Y., Wu, J., & Hsu, W. (2012). Collaborative Action Research on Technology Integration for Science Learning. *Journal of Science Education & Technology, 21(1),* 125-132.

This article is a study of a sixth grade classroom, using technology within science.  The challenge is not the technology, it is how technology is used by classroom teachers and students.  Incorporating technology into project-based learning enables the students to experience how to learn with technology as an active agent in their learning.  The students in this sixth grade class had the opportunity, through PBL to create PowerPoint presentations and in conclusion they lacked visual literacy. Teachers should teach information literacy by integrating it into an inquiry project for a subject learning instead of teaching it separately.

Zyad, H. (2016). Integrating Computers in the Classroom: Barriers and Teachers' Attitudes. *International Journal Of Instruction*, *9(1),* 65-78.

Students are growing up in a very different world, this generation of learners has changed. They are living and are part of an environment with advanced technologies has allowed them to develop multi-literacies. Instead of ignoring this development and possibilities that this has opened up, educators, education policy makers, teachers and the civil society as a whole need to take advantage of this situation to create a positive learning environment. One encounter that this article discusses is the lack of technical training. It is significant that the teacher be trained in these new tools to use them appropriately with the students.